



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,603	01/31/2002	Boby Joseph	01-1045	3420
20306	7590	06/01/2006	EXAMINER	
MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP			POLLACK, MELVIN H	
300 S. WACKER DRIVE			ART UNIT	
32ND FLOOR			PAPER NUMBER	
CHICAGO, IL 60606			2145	

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/062,603	Applicant(s) JOSEPH ET AL.	
	Examiner Melvin H. Pollack	Art Unit 2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/9/06</u> . | 6) <input checked="" type="checkbox"/> Other: <u>see attached office action</u> . |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 and 4-27 have been considered but are moot in view of the new ground(s) of rejection.
2. In the response to the last office action, the applicant changed the scope of the claims by adding controller separate from the primary and secondary switches to all independent claims. The examiner has determined that the change in scope is materially sufficient to necessitate search and consideration of the added limitations and/or clarifications. As a result, a final amendment is necessitated even if the examiner provides a new art rejection. The examiner acknowledges that no new matter has been added by this amendment.
3. The examiner accepts the new IDS.
4. Applicant states that the art does not expressly disclose a controller separate from the selection switches (P. 10). New art has been added to teach the newly added limitations.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregorat (6,327,243) in view of Nederveen et al. (6,853,623) and Eng et al. (6,810,008).
7. For claim 1, Gregorat teaches a network system (abstract; col. 1, line 1 - col. 3, line 60) comprising:

Art Unit: 2145

- a. A network interface (Fig. 2, #204, in view of Fig. 1, #111) connected to a first network (Fig. 1, #105);
 - b. A selection switch connected to the network interface (Fig. 2, #206);
 - c. A primary switch connected to the network interface via the selection switch (Fig. 2, #201);
 - d. A secondary switch connected to the network interface via the selection switch (Fig. 2, #251); and
 - e. A second network connected to both the primary switch and the secondary switch ((Fig. 1, #113 in view of col. 4, lines 15-30);
 - f. Wherein there are controls to the selection switch (col. 4, lines 40-67) to enable packet-switched data to be transferred (col. 4, lines 55-65; col. 5, lines 20-23) between the network interface and the second network across the primary switch if the primary switch is determined to be operable (col. 5, lines 55-60), and to enable the packet-switched data to be transferred between the network interface and the second network across the secondary switch if the primary switch is determined to be inoperable (col. 7, line 45 – col. 8, line 20, in view of Fig. 3).
8. Gregorat does not expressly disclose a route server connected to the selection switch, wherein the route server controls the functioning of the selection switch to enable packet-switched data transfers. Gregorat does disclose, however, the decision process of determining the route and switches to travel to, as well as motivation for a controlling route server in order to perform traffic load balancing (col. 4, lines 40-67). Gregorat further discloses that the switch may contain additional circuitry (col. 5, lines 5-15). Eng teaches a method (abstract) of utilizing

Art Unit: 2145

redundant switches (col. 1, line 1 – col. 3, line 55) such that the switches (Fig. 3, #350-380) comprise a route server (packet engine) for controlling the route (col. 4, lines 35-55) and further for rerouting to a backup switch (col. 5, lines 1 – 55). At the time the invention was made, one of ordinary skill in the art would have added Eng route server techniques to Gregorat in order to fulfill Gregorat's desired load balancing techniques above, and further to reduce latency in swichover cases (col. 2, lines 55-60).

9. Gregorat does not expressly disclose a controller connected to the primary switch that determines if the primary switch is operable, the controller being separate from the primary switch and the secondary switch, the controller able to determine whether the primary switch is operable. Gregorat, however, teaches the logical separation of the switch and a device that determines if the switch is operational. Therefore, one of ordinary skill in the art would change the logical separation into a physical one if given sufficient motivation to do so.

10. In re. Dulberg, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961) (The claimed structure, a lipstick holder with a removable cap, was fully met by the prior art except that in the prior art the cap is "press fitted" and therefore not manually removable. The court held that "if it were considered desirable for any reason to obtain access to the end of [the prior art's] holder to which the cap is applied, it would be obvious to make the cap removable for that purpose.").

11. Nederveen teaches a method and system (abstract) of providing remote monitoring of switches (col. 1, line 1 – col. 5, line 15), wherein an outside controller (Fig. 2, #401) is connected to the primary switch and listens to reports (col. 8, line 44 – col. 9, line 65) from the primary switch (Fig. 3, #300), for the purposes of managing network components (col. 11, lines 5-10), such as determining the routing of packets through a set of switches (col. 6, line 57 – col. 8, line

Art Unit: 2145

25). At the time the invention was made, one of ordinary skill in the art would have added Nederveen's centralized monitoring system to Gregorat in order to minimize equipment costs and to further avoid performance degradation of the switch (col. 4, lines 20-45).

12. For claim 6, Gregorat teaches a first link connecting the primary switch to the second network (col. 4, lines 30-55).

13. Claims 4, 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregorat, Eng and Nederveen as applied to claim 1 above, and further in view of Bartfai et al. (6,012,150).

14. For claim 4, Gregorat, Eng and Nederveen teaches a controller determines if the primary switch is operable (Fig. 3, #305), but do not expressly disclose determination via a heartbeat mechanism. Bartfai teaches a method (abstract) of handling primary and backup nodes (col. 1, line 1 – col. 2, line 60), wherein a backup node is determined to have failed via a heartbeat measurement (col. 3, line 45 – col. 4, line 13). At the time the invention was made, one of ordinary skill in the art would have provided Bartfai's operability determination mechanism in order to implement the Gregorat method and further to provide a backup mechanism for switchover in the event that the primary controller itself should fail (col. 4, lines 60-65).

15. For claim 5, Gregorat teaches that the controller deactivates the primary switch if the primary switch is inoperable (Fig. 3, #310).

16. Claims 7, 12, 15, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregorat, Eng and Nederveen as applied to claims 1, 6 above, and further in view of Baskey et al. (6,148,410).

Art Unit: 2145

17. For claims 7, 15, Gregorat teaches that the packet-switched data is transferred across the primary switch if the first link is operable (col. 5, line 55 – col. 6, line 6), and the packet-switched data is transferred across the secondary switch if a failure occurs (col. 4, lines 55-65), but does not expressly disclose what said failure might comprise. Specifically, Gregorat does not expressly disclose that the failure occurrence is that the first link is inoperable. Baskey teaches a method (abstract) of providing redundant devices in a Gregory-like manner (col. 1, line 1 – col. 2, line 15), wherein failure recovery includes recoverable links (col. 5, lines 5-40) and further wherein a switchover system may be utilized in order to perform recovery of a failed link (col. 11, line 50 – col. 13, line 10). At the time the invention was made, one of ordinary skill in the art would have used the failure recovery methods of Baskey in order to determine failure definitions and recovery methods for Gregorat and further to ensure recovery from reach-ability failures (col. 1, lines 60-65).

18. For claim 12, Gregorat does not expressly disclose that the packet-switched data comprises Internet protocol packets, but does disclose that the packet may utilize a wide variety of protocols (col. 1, lines 30-31). Baskey teaches that the packets are IP packets (col. 1, lines 15-20). At the time the invention was made, one of ordinary skill in the art would have used Baskey IP packets in Gregorat in order to improve client-server requesting methods (col. 1, line 15).

19. Claim 22 is drawn to the limitations in claim 12. Therefore, since claim 12 is rejected, claim 22 is also rejected for the reasons above.

20. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gregorat, Eng and Nederveen as applied to claim 6 above, and further in view of Popovich (6,771,593).

21. For claim 8, Gregorat does not expressly disclose that the first link comprises optical fiber. Gregorat remains silent in regards to the physical type of link. Popovich teaches a method (abstract) of providing redundant nodes for failure handling (col. 1, line 1 – col. 2, line 60) in which nodes are interconnected via fiber optic lines (col. 3, line 50; col. 9, line 20). At the time the invention was made, one of ordinary skill in the art would have used fiber optic lines in a Gregorat system in order to determine details necessary to implement Gregorat and further because the speed of optical connections is well known in the art.

22. Claims 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregorat, Eng, Nederveen and Popovich as applied to claim 8 above, and further in view of Thomas et al. (US 2003/0086140).

23. For claim 9, Gregorat and Popovich do not expressly disclose a laser utilized for transmitting the packet-switched data along the first link is deactivated if at least one of the primary switch and first link are inoperable. Gregorat does, however, teach that signals to the primary controller are disconnected (col. 5, lines 57-63; col. 7, lines 45-65), and that signals along the first link are deactivated (see above). Popovich does not expressly disclose how a fiber-optic network operates. Thomas teaches a method (abstract) of monitoring a fiber optic network (Paras. 1-24) in which signals are activated to transmit data and deactivated when data transmission stops (Paras. 54-68, 81, 82, 84). Thus, when Gregorat performs the link deactivation signal, the laser is deactivated. At the time the invention was made, one of ordinary skill in the art would have used Thomas as a reference for designing a fiber-optic network (Para. 3).

Art Unit: 2145

24. For claim 10, Gregorat and Popovich do not expressly disclose a laser utilized for transmitting the packet-switched data along the first link is explicitly deactivated if maintenance operations are to be performed on at least one of the primary switch and first link. As shown above, Gregorat does disclose the link deactivation, and further discloses that it is explicit (Fig. 3, #305). Popovich does not expressly disclose how a fiber-optic network operates. Thomas teaches a method (abstract) of monitoring a fiber optic network (Paras. 1-24) in which signals are activated to transmit data and deactivated when data transmission stops (Paras. 54-68, 81, 82, 84). Thus, when Gregorat performs the link deactivation signal, the laser is deactivated. At the time the invention was made, one of ordinary skill in the art would have used Thomas as a reference for designing a fiber-optic network (Para. 3).

25. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gregorat, Eng, Nederveen and Popovich as applied to claims 1, 8 above, and further in view of Farris et al. (6,154,445).

26. For claim 11, Gregorat does not expressly disclose that the network interface comprises a digital signal processing card for converting between circuit-switched data and the packet-switched data. Popovich teaches that the device supports voice and data communications (col. 1, lines 25-30; col. 3, lines 60-67) and that a call may be converted into data (col. 5, line 40 – col. 6, line 10), but does not expressly disclose that a card performs the process. Farris teaches a method (abstract) of combining voice and data networks to maximize connection availability (col. 1, line 1 – col. 6, line 30) wherein a digital line card packetizes voice data (col. 11, lines 15-30). At the time the invention was made, one of ordinary skill in the art would have added Farris

Art Unit: 2145

teachings to implement Popovich and further to provide stronger reliability for Gregorat communications (col. 6, lines 10-20).

27. Claims 13, 14, 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregorat, Eng, and Nederveen as applied to claim 1 above, and further in view of Coile et al. (6,108,300) and Baskey et al. as applied to claims 7, 15 above.

28. For claim 13, Gregorat does not expressly disclose that the second network comprises a primary router, but does allow for connections to any end-user device (col. 4, lines 15-45). Coile teaches a method (abstract) of providing generic networking devices (col. 1, line 1 – col. 4, line 25) in which the device may be any network device (col. 5, lines 5-15 and 30-40) provided it communicates with a switch (col. 7, lines 15-25; col. 10, lines 25-50). Baskey teaches routers that fulfill Coile's networking device definition (col. 2, line 45 – col. 3, line 40). At the time the invention was made, one of ordinary skill in the art would have added Coile and Baskey to Gregorat in order to allow Gregorat switches to access a WAN and connect to multiple systems (col. 1, lines 5-10).

29. For claim 14, Gregorat and Coile do not expressly disclose that the second network further comprises a secondary router, the packet-switched data is transferred between the network interface and the primary router if the primary router is operable, and the packet-switched data is transferred between the network interface and the secondary router if the primary router is inoperable. Baskey teaches these limitations (col. 2, line 45 – col. 3, line 40). At the time the invention was made, one of ordinary skill in the art would have added Coile and

Art Unit: 2145

Baskey to Gregorat in order to allow Gregorat switches to access a WAN and connect to multiple systems (col. 1, lines 5-10).

30. Claims 18-20 are drawn to the limitations in claim 14. Therefore, since claim 14 is rejected, claims 18-20 are also rejected for the reasons above.

31. Claims 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregorat, Eng, Nederveen and Baskey as applied to claim 15 above, and further in view of Bartafi, as applied to claim 5 above, and Thomas, as applied to claim 9 above.

32. Claim 16 is drawn to the limitations in claims 5 and 9. Therefore, since claims 5 and 9 are rejected, claim 16 is also rejected for the reasons above.

33. Claim 17 is drawn to the limitations in claim 9. Therefore, since claim 9 is rejected, claim 17 is also rejected for the reasons above.

34. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gregorat, Eng, Neverdeen and Baskey as applied to claim 15 above, and further in view of Popovich and Farris, as applied to claim 11 above.

35. Claim 21 is drawn to the limitations in claim 11. Therefore, since claim 11 is rejected, claim 21 is also rejected for the reasons above.

36. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gregorat, Eng, Nederveen and Baskey as applied to claim 15 above, and further in view of Bartfai, as applied to claim 4 above.

Art Unit: 2145

37. Claim 23 is drawn to the limitations in claim 4. Therefore, since claim 4 is rejected, claim 23 is also rejected for the reasons above.

38. Claims 24, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregorat Eng, and Nederveen as applied to claim 1 above, and Bartfai as applied to claim 4 above, and Popvich and Farris as applied to claim 11 above.

39. Claim 24 is drawn to the limitations in claims 1-4 and 11. Therefore, since claims 1-4 and 11 are rejected, claim 24 is also rejected for the reasons above.

40. Claim 27 is drawn to the limitations in claim 4. Therefore, since claim 4 is rejected, claim 27 is also rejected for the reasons above.

41. Claims 25, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregorat, Eng, and Nederveen as applied to claim 1 above, and Bartfai as applied to claim 4 above, and Popvich and Farris as applied to claim 11 above, and further in view of Coile and Baskey as applied to claims 12-14 above.

42. Claim 25 is drawn to the limitations in claims 12 and 13. Therefore, since claims 12 and 13 are rejected, claim 25 is also rejected for the reasons above.

Claim 26 is drawn to the limitations in claim 14. Therefore, since claim 14 is rejected, claim 26 is also rejected for the reasons above.

Conclusion

Art Unit: 2145

43. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

44. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They regard further teachings on physically separate switch monitoring systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin H. Pollack whose telephone number is (571) 272-3887. The examiner can normally be reached on 8:00-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2145

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MHP
25 May 2006


JASON CARDONE
SUPERVISORY PATENT EXAMINER